

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Previously presented) The method according to claim 25 wherein the allele-specific primers are designed to have a polymorphic site within 4 nucleotides from the 3' terminus of the allele-specific primer.
3. (Previously presented) The method according to claim 25 wherein said mismatch nucleotide from at least one of said allele-specific primers is introduced to the nucleotide adjacent to the polymorphic site.
4. (Previously presented) The method according to claim 25 wherein said mismatch nucleotide from both of said allele specific primers is adjacent to the polymorphic site.

- 5-10. (Canceled)
11. (Previously presented) The method according to claim 25 wherein the detection of single nucleotide polymorphisms comprises determining homo/heterozygosity of single nucleotide polymorphisms.

12. (Withdrawn) A primer set for carrying out the method according to claim 1, which comprises two types of allele-specific primers designed in such a way that the amounts of the amplified products of each allele are substantially the same.

13. (Withdrawn) A method for detecting single nucleotide polymorphisms, which utilizes two types of allele-specific primers under such polymerase reaction conditions that the amounts of the amplified products of each of heterozygous alleles are substantially the same.

14. (Withdrawn) The method according to claim 13, wherein the polymerase reaction is a PCR reaction.

15. (Withdrawn) The method according to claim 13 where the amplified products of each of heterozygous alleles becomes substantially the same by using different numbers of reaction cycles for each allele-specific primer in the PCR using two types of allele specific primers.

16. (Withdrawn) The method according to claim 13 wherein the amplified products of each of heterozygous alleles become substantially the same by using different primer concentrations for each allele-specific primer in the PCR using two types of allele-specific primers.

17. (Withdrawn) The method according to claim 13 wherein the amplified products of each of heterozygous alleles becomes substantially the same by using different initial amounts of a template for each allele-specific primer in the PCR using two types of allele-specific primers.

18. (Withdrawn) The method according to claim 13 wherein the allele-specific primer is designed to have a polymorphic site within 4 nucleotides from the 3' terminus of the allele-specific primer.

19. (Withdrawn) The method according to claim 13 wherein single nucleotide polymorphisms are detected by using a product of polymerase reactions.

20. (Withdrawn) The method according to claim 19 wherein single nucleotide polymorphisms are detected by employing electrophoresis, chromatography or HPLC as a detection means.

21. (Withdrawn) The method according to claim 13 wherein single nucleotide polymorphisms are detected using a by-product of polymerase reactions.

22. (Withdrawn) The method according to claim 21 wherein the by-product is pyrophosphoric acid.

23. (Withdrawn) The method according to claim 13 wherein pyrophosphoric acid is detected using a dry analytical element.

24. (Withdrawn) The method according to claim 13 wherein the detection of single nucleotide polymorphisms comprises determining homo/heterozygosity of single nucleotide polymorphisms.

25. (Currently Amended) A method for detecting a single nucleotide polymorphism, comprising

designing two allele-specific primers;

wherein a first primer contains an artificial mismatch nucleotide and a nucleotide complementary to a first allele and a second primer contains an artificial mismatch nucleotide and a nucleotide complementary to a second allele, said primers able to distinguish said alleles;

wherein the artificial mismatch nucleotide in the first primer is different from the artificial mismatch nucleotide in the second primer,

amplifying a sample with said first and second primers, wherein an amount of amplification product from said first primer and an amount of amplification product from said second primer is substantially the same when the two alleles are present in the sample,

wherein single nucleotide polymorphisms are detected using a by-product of polymerase reactions.

wherein pyrophosphoric acid is the by-product, and

wherein pyrophosphoric acid is detected using a dry analytical element.

26. (Currently Amended) The method according to claim 25, wherein said artificial mismatch nucleotide in said first primer is adenine and said artificial mismatch nucleotide in said second nucleotide primer is cytosine.